M-15347 US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	Yin S. Tang		
Title:	Lensed Tip Optical Fiber and Method of Making the Same		
Serial No.:	10/799,483	Filing Date:	March 12, 2004
Examiner:	Jerry M. Blevins	Group Art Unit:	2883
Docket No.:	M-15347US	Confirmation No.	8401

Irvine, California
January 9, 2008

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Dear Sir:

This responds to the Office Action dated October 9, 2007. Please enter and consider the following remarks.

REMARKS

Claims 1 and 3-22 are pending. Applicant respectfully requests reconsideration and review of the pending claims.

Applicant has filed this pre-appeal brief request for review in light of the following clear error in the October 9, 2007 Office Action.

The Okubo et al. (U.S. 5,565,978) reference does not teach or suggest "applying energy to the modified end of the optical fiber member to form a lens surface with a desired focal length".

In the Office Action, the Examiner states, in part, that:

> Namely, column 8, lines 13-25 and column 10, lines 23-30, which directly present the application of energy to form a lens surface, mention that an alternative method would be to use a self-focusing lens placed at the end of the optical fiber. This would imply that the formation of a lens at a modified end of the optical fiber would also serve the role of focusing light.

Okubo teaches a refractive index sensor using total internal reflection of light beams. (See, e.g., col. 2, lines 33-36; Figs. 2(a), 3, 5, 6, 13, and 14). The sensor comprises one or more optical fibers 10 abutting a core glass 3. Light exiting the optical fiber(s) broadens or expands (as opposed to converging or focusing) in the core glass. (See, e.g., col. 6, lines 4-10 and 62-67, col. 8, lines 13-15, col. 8, line 65 to col. 9, line 2, col. 9, lines 16-18, 41-43, and 65-67, col. 10, lines 15-20; Figs. 2(a), 3, 5, 6, 13, and 14). Thus, Okubo clearly teaches a fiber that expands the exiting light. Okubo further teaches that the "expansion angle can be altered by working the end of the optical fiber, e.g., by melt processing or etching to a hemispherical lens or rounded-tip tapered shape." (Col. 8, lines 14-18). Even the Examiner admits that "the fiber itself serves to expand light".

The portion cited by the Examiner for use of a self-focusing lens is simply that an "optical fiber type lens/self-focusing (SELFOC) lens (50)" can be located adjacent the input

LAW OFFICES OF
MACPHERSON KWOK
CHEN & HEID LLP

2033 Gateway Place
Suite 400
San Jose, CA 95110
(949) 752-7040
FAX (949) 752-7049

face (Fig. 13), inside the waveguiding layer (Fig. 14), or close to the output face. (Col. 8, lines 18-23). This is simply teaching that an additional SELFOC lens 50 can be used. This does not teach or suggest that the "melt processing or etching" is on the SELFOC lens 50. In addition, Okubo further teaches that "possible means of broadening the measurement range . . . include . . . interposing a waveguide layer lens (50) between the optical fiber and the input face to enlarge the fiber's expansion angle (FIG. 13)". (Col. 8, lines 25-33) (emphasis added). Thus, the lens 50 acts to further expand the angle, as seen in Figs. 13 and 14.

Accordingly, Applicant contends that it is clear error for the Examiner to conclude that Okubo teaches "applying energy to the modified end of the optical fiber member to form a lens surface with a desired focal length" because Okubo teaches a broadening lens, which necessarily has no focal length.

LAW OFFICES OF
MACPHERSON KWOK
CHEN & HEID LLP

2033 Gateway Place
Suite 400
San Jose, CA 95110
(949) 752-7040
FAX (949) 752-7049

CONCLUSION

For the above reasons, pending claims 1 and 3-22 are in condition for allowance and allowance of the application is respectfully requested.

Certification of Facsimile Transmission
I hereby certify that this paper is being facsimile transmitted to the U.S. Patent and Trademark Office on the date shown below.

Sandy Kim — January 9, 2008 Date of Signature

Respectfully submitted,

Tom Chen
Attorney for Applicant
Reg. No. 42,406

LAW OFFICES OF
MACPHERSON KWOK
CHEN & HEID LLP

2033 Gateway Place
Suite 400
San Jose, CA 95110
(949) 752-7040
FAX (949) 752-7049